**Homework 51** Name:\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_

**Congruent Triangles AAS, SSA, AAA** Period:\_\_\_\_Date:\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_

Directions: Show all your work and write in complete sentences when needed.

For #1- 3, determine if the two triangles are congruent. If so, write a congruency statement and identify what postulate is needed to prove congruency.

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| 1) | 2) | | 3) |
| 4) Use the given coordinates to determine if Δ*ABC* ≅Δ*DEF.*  *A*(1, 2), *B*(4, –3), *C*(2, 5), *D*(4, 7), *E*(7, 2), *F*(5, 10) | | 5) Use the given coordinates to determine if Δ*ABC* ≅Δ*DEF.*  *A*(1, 1), *B*(4, 0), *C*(7, 5), *D*(4, –5), *E*(6, –6), *F*(9, –1) | |

For #6-11, determine if the two triangles are congruent. If so, write a congruency statement and identify what postulate is needed to prove congruency.

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| 6) | 7) | 8) |
| 9) | 10) | 11) |

**Mixed Review**

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| 1) What are the values that would make the following expression undefined? | 2) What is the distance between the following two points?  (1, 5) (3, -4) |
| 5) An equation of a line in the (x, y) coordinate plane is given as:  -5x – 10 = 15y   1. What is the slope of this line? 2. At what point (x, y) will this line cross the x-axis? 3. At what point (x, y) will this line cross the y-axis? | 6) The points (4, 6) and (9, 10) are on line *a*. Find the equation for the line that is parallel to line *a* and passes through point (0, 4). |
| 7) Simplify: | 8) If , then x =? |